

REMARKS

Prior to entry of this paper, Claims 1-22, 26-42, 47-48 and 52-59 were pending. Claims 1-22, 26-42, 47-48 and 52-59 were rejected. In this paper, Claim 33 is amended. Claims 1-22, 26-42, 47-48 and 52-59 are currently pending. In this paper, whenever language is quoted from a claim that has been amended with regard to the portion of the claim quoted, the quoted claim language is that of the claim as amended. No new matter is added by way of this amendment. For at least the following reasons, Applicants respectfully submit that each of the presently pending claims is in condition for allowance.

Claims 1-11, 12-16, 17-22, 26-31, 32, 33-35, 36-42, 47-48 and 52-59

Claims 1-11, 12-16, 17-22, 26-31, 32, 33-35, 36-42, 47-48 and 52-59 were rejected under 35 U.S.C. § 102(e) as being anticipated by Albert et al. (U.S. Patent No. 6,742,045) hereafter "Albert".

Claim 1:

Argument 1: Albert fails to disclose, "if each received packet in the flow of packets is unassociated with the traffic manager, performing actions, including: (A) selecting another traffic manager"

The rejection to Claim 1 is respectfully traversed. It is respectfully submitted that Claim 1 is allowable at least because Albert fails to disclose, "if each received packet in the flow of packets is unassociated with the traffic manager, performing actions, including: (A) selecting another traffic manager", as recited in Applicant's Claim 1.

In contrast, Albert discusses a forwarding agent that intercepts packets, and if a matching affinity is not found, the packet is compared against wildcard affinities. (Albert, col. 15, lines 45-50). The wildcard affinities specify subnet masks that determine sets of source and destination IP addresses that will be forwarded to a service manager. In addition, ports or sets of ports and protocol may be specified in the wildcard affinity as well. (Albert, col. 8, lines 23-29). **If no matching wildcard affinities are found, normal IP routing occurs instead of forwarding the packet to a service manager.** (Albert, col. 15, lines 50-51).

In Albert, if a packet is associated with a service manager, either by a fixed affinity or a wildcard affinity, it is forwarded to the service manager that it is associated with via the fixed affinity or wildcard affinity. However, in Albert, if the packet is unassociated with any traffic managers, another traffic manager is not selected. Rather, in Albert, if the packet is unassociated with any traffic manager, normal IP routing occurs. Albert fails to teach, if the flow is unassociated with any traffic manager via fixed affinity or wildcard affinity, selecting another traffic manager.

Applicants' representative made a similar argument in a previous paper. The Office responded by arguing that Albert '045 explicitly teaches "selecting another traffic manager." However, the argument is not that Albert '045 fails to teach "selecting another traffic manager", but that Albert fails to teach, **"if each received packet in the flow of packets is unassociated with the traffic manager, performing actions, including: (A) selecting another traffic manager"** (emphasis added). The Office discusses the fixed affinities and wildcard affinities at length. However, in Albert, all of these affinities, including fixed affinities and wildcard affinities, are **an association with a traffic manager**. In Albert, the service manager uses fixed affinities to provide instructions to forwarding agents detailing where packets for each load balanced flow are to be forwarded, therefore the fixed affinity defines an association between the packets and the service manager. (See col. 8, lines 10-17 of Albert). The wildcard affinities specify subnet masks that determine sets of source and destination IP addresses that will be forwarded to a service manager. Therefore, the wildcard affinities define associations between packets and the service manager. (Albert, col. 8, lines 23-29).

Again, Applicants' representative is not simply arguing that Albert fails to teach "selecting another traffic manager", but that Albert fails to teach, **"if each received packet in the flow of packets is unassociated with the traffic manager, performing actions, including: (A) selecting another traffic manager"** (emphasis added). In other words, Applicants' representative is arguing that Albert fails to teach, if no matching fixed affinities or wildcard affinities are found, selecting another traffic manager. Albert explicitly discusses that **if no matching wildcard affinities are found, normal IP routing occurs instead of forwarding the packet to a service manager**. (Albert, col. 15, lines 50-51).

Accordingly, it is respectfully submitted that Albert fails to teach, “if each received packet in the flow of packets is unassociated with the traffic manager, performing actions, including: (A) selecting another traffic manager”. Therefore, it is respectfully submitted that Claim 1 is allowable in view of Albert and is in condition for allowance.

Argument 2: Albert fails to teach a processor that is arranged to perform both “forwarding the flow of packets to the associated traffic manager” and “associating the other traffic manager with the flow of packets”:

In Albert, it is the service manager that establishes an association by fixed affinity or wildcard affinity, not the distributor. In Albert, the **distributor** forwards packets to a service manager if the packet is associated with the traffic manager, but the **distributor** does not associate a packet with a service manager. In Albert, only a service manager can create an association of the packet with the service manager, by means of an affinity key or a wildcard affinity. (Albert, col. 7, line 61 through col. 8, line 21). For example, see col. 8, lines 5-6 (“Instructions for how to handle packets are specified for each flow **by the service managers** using an affinity key”, emphasis added), and col. 8, lines 18-21 (“the service manager also provides general instructions to each forwarding agent that specify which new flows the service manager is interested in seeing. These general instructions are provided using wildcard affinities”). Therefore, Albert fails to teach a processor that is arranged to perform both “forwarding the flow of packets to the associated traffic manager” and “associating the other traffic manager with the flow of packets”. For this additional reason, it is respectfully submitted that Claim 1 is allowable in view of Albert.

Applicants’ representative made this argument in a previous paper. However, the Office has not addressed this argument.

Claim 33:

Argument 3: Albert fails to disclose, “transmitting, from the traffic manager to the distributor, a first partial server-side connection key corresponding to another flow of

packets, wherein the first partial server-side connection key includes known fields and unknown fields; learning, at the distributor, of a second partial server-side connection key which includes fields corresponding to unknown fields of the first partial server-side connection key; and storing, at the distributor, an association between the second partial server-side connection key and the traffic manager associated with the flow of packets for use in forwarding packets of said another flow of packets”

It is respectfully submitted that Claim 33 is allowable at least because Albert fails to disclose, “transmitting, from the traffic manager to the distributor, a first partial server-side connection key corresponding to another flow of packets, wherein the first partial server-side connection key includes known fields and unknown fields; learning, at the distributor, of a second partial server-side connection key which includes fields corresponding to unknown fields of the first partial server-side connection key; and storing, at the distributor, an association between the second partial server-side connection key and the traffic manager associated with the flow of packets for use in forwarding packets of said another flow of packets”, as recited in Claim 33.

Albert discusses an affinity key, which is a 5-tuple that includes the source and destination IP addresses, the source and destination port number, and a protocol identification. In Albert, the affinity key appears to always include all five of those fields. (Albert, Col. 7, lines 26-39). Albert fails to disclose existence of a first partial affinity key in which some fields of the 5-tuple are unknown, and learning of a second partial affinity key that includes fields unknown in the first partial key. Therefore, Claim 33 is allowable in view of Albert and is in condition for allowance.

For some reason, it appears that the Office is attempting to use IP identifier of Albert as the recited “connection key”. However, it is only the affinity key of Albert which arguably creates correspondence/association between a flow of packets and a traffic manager/service manager, not the IP identifier. (Claim 33 refers to “signal indicates a processing instruction associated with the flow of packets” and “first partial server-side connection key corresponding to another flow of packet” and “an association between the second partial server-side connection key and the traffic manager associated with the flow of packets for use in forwarding packet of said another flow of packets”). For example, see Col. 7, lines 62-64 of Albert, which states, “Affinity keys are used by the service managers to identify flows passing through forwarding agents which are to be handled

by the forwarding agents in a certain manner.” In Albert, it is the affinity keys that identify the flows to be forwarded, not the IP identifier. Further, in Albert, there is no determination as to whether or not to age an IP identifier. In Albert, there is discussion of aging the affinity key, but not of aging an IP identifier.

Claim 26:

Argument 4: Albert fails to disclose, “at a distributor... performing load-balancing, including making a determination as to which traffic manager of the plurality of traffic managers to forward packets to based on balancing a load across the plurality of traffic managers”

The rejection to Claim 26 is respectfully traversed. It is respectfully submitted that Claim 26 is allowable at least because Albert fails to disclose a distributor that performs load balancing. Applicants’ specification teaches a distributor that may select a traffic management device to balance a load across the traffic management devices. The distributor performs the load-balancing determination. (See Applicants’ specification at page 13, lines 8-18).

In contrast, Albert discusses forwarding agents that do not have any decision making capability to provide load balancing. The Office equates the “forwarding agents” to the claimed “distributors” and the “service managers” to the claimed “traffic managers”. In Albert, the service managers provide the decision making capability that is required to provide load balancing. The service managers send specific instructions to each of the forwarding agents detailing how certain flows of packets are to be processed. In Albert, it is the service managers (which the Office equates to the claimed traffic managers) that perform decision making regarding load balancing, not the forwarding agents (which the Office equates to the claimed distributors). Accordingly, Albert fails to disclose, “at a distributor... performing load-balancing, including making a determination as to which traffic manager of the plurality of traffic managers to forward packets to based on balancing a load across the plurality of traffic managers”, as recited in Applicants’ Claim 26.

Regarding the aforementioned recitation, the Office states, on page 21 of the last Office Action, “see col. 3, lines 19-21, see col.8, lines 45-48, which discusses service manager/traffic

manager send wildcard affinities, which specify destination addresses of service customers that corresponding to virtual IP addresses that are to be load balanced by the service manager, to forwarding agent. Thus, the forwarding agents as the distributor forward new packets send to those virtual IP addresses to the appropriate service manager as traffic manager, see col. 11, lines 36-53, see col.28, lines 26-55, which discusses forward agent as distributor determines a service manager as traffic to handle a packet” (emphasis in original).

However, it is respectfully submitted that this emphasized section proves the point that, in Albert, it is not the forwarding agent/distributor that makes the determination as to which traffic manager, of the plurality of traffic managers, to forward packets to based on balancing a load across the plurality of traffic managers. Rather, in Albert, it is the service managers/traffic managers that make the determination, and which send wildcard affinities based on the load balancing determination. In Albert, the forwarding agent/distributor merely acts on the determination/decision made by the service manager/traffic manager. Claim 26 requires that the forwarding agent/distributor make the load balancing determination.

In contrast, in Albert, the service manager/traffic manager makes the load balancing decision, sends an affinity based on that decision, and the forwarding agent/distributor performs the load balancing based on the affinity. In Albert, the affinity tells the forwarding agent/distributor where to send the packets, but based on the load-balancing decision made by the service manager/traffic manager, not by the forwarding agent/distributor. In Albert, the forwarding agent/distributor does not make a determination as to which service manager/traffic manager of the plurality of traffic managers to forward packets to based on balancing a load across the plurality of service managers/traffic managers. Instead, in Albert, the forwarding agent/distributor sends the packet to the service manager/traffic manager indicated by the affinity. In Albert, the determination as to which service manager/traffic manager of the plurality of traffic managers to forward packets to based on balancing a load across the plurality of service managers/traffic managers was made previously by the service manager/traffic manager, and the forward agent/distributor merely performs the forwarding according the determination already made by the service manager/traffic manager.

Other rejected claims

The rejections to Claims 12, 17, 36, 47, and 52 are respectfully traversed. Since Claims 12, 17, and 36 are somewhat similar to Claim 1, albeit different in some ways, Claims 12, 17, and 36 are respectfully submitted to be also allowable for at least substantially the same reasons as Claim 1.

Additionally, since Claims 47 and 52 are somewhat similar to Claim 26, albeit different in some ways, Claims 47 and 52 are also respectfully submitted to be allowable for at least substantially the same reasons as Claim 26.

Furthermore, Claims 2-11 and 57-59 are respectfully submitted to be allowable at least because they depend from Claim 1; Claims 13-16 are respectfully submitted to be allowable at least because they depend from Claim 12; Claims 18-22 are respectfully submitted to be allowable at least because they depend from Claim 17; Claims 27-31 are respectfully submitted to be allowable at least because they depend from Claim 26; Claims 34 and 35 are allowable at least because they depend from Claim 33; and Claims 37-42 are respectfully submitted to be allowable at least because they depend from Claim 36; Claim 48 is respectfully submitted to be allowable at least because it depends from Claim 47; and Claims 53-56 are respectfully submitted to be allowable at least because they depend from Claim 52.

CONCLUSION

It is respectfully submitted that each of the presently pending claims (Claims 1-22, 26-42, 47-48 and 52-59) is in condition for allowance and notification to that effect is requested. Examiner is invited to contact the Applicants' representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby. Although only certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentable. Applicant reserves the right to raise these arguments in the future.

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Respectfully submitted,

By _____/Matt Gaffney/
Matthew M. Gaffney, Registration No.: 46,717

DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770
(206) 262-8910
(212) 527-7701 fax
Attorneys/Agents For Applicant